

REMARKS

This Amendment is responsive to the Office Action mailed on September 5, 2006. Claims 1, 5, 7, 10, 11, 13, 17-19, 23, 24, 27, 30, 31, 32, 34, 35, 37, and 38 are amended. Claims 2, 3, 12, 16, 33 and 36 are cancelled. Claims 1, 4-11, 13-15, 17-32, 34, 35, 37, and 38 are pending.

Claims 1, 2, 4, 5, 7-20, 23-26, and 28-36 are rejected under 35 U.S.C. § 102(b) as being anticipated by King(US 3,874,388).

Claims 3 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over King in view of Redmond (US 6,613,070).

Claim 27 is rejected under 35 U.S.C. § 103(a) as being unpatentable over King in view of Rousseau (US 6,616,685).

Claims 21, 22, and 37 are rejected under 35 U.S.C. § 103(a) as being unpatentable over King in view of Himpens (US 5,397,331).

Claim 38 is rejected under 35 U.S.C. § 103(a) as being unpatentable over King in view of Shichman (US 6,197,041).

Applicants respectfully traverse these rejections in view of the amended claims and the following comments.

Discussion of Amended Claims

Claim 1 is amended to include the subject matter of claims 3, 12, and 16. Claims 2, 3, and 12 are cancelled to avoid duplication of claimed subject matter.

Minor clarifying amendments have been made to claims 5, 7, 10, 11, 13, 17-19, 23, 24, 27, 30 and 38.

Claim 31 is amended to include the subject matter of claims 33 and 36. Claim 31 is further amended to specify that the centering means inhibits a transverse movability of the holding mandrel relative to the positioning element (See, e.g., Applicants' specification, page 15, lines 21-22).

Claims 33 and 36 are cancelled to avoid duplication of claimed subject matter. Claims 32,

34, 35, and 37 are amended to depend on claim 31, rather than cancelled claim 33.

Discussion of Prior Art Rejection of Amended Claim 1

Amended claim 1 now includes the subject matter of claims 3, 12, and 16. Accordingly, claim 1 now specifies that the wings are held via film hinged joints on an upper side of the base part. The upper side of the base part faces the tissue when the bearing areas of the wings bear on the tissue. The wings do not protrude laterally over the base part when they are in a flapped-in position.

Therefore, the transverse dimensions of the closure device are limited by the base part, as in the flapped-in position the wings do not protrude over the base part. This allows easy application of the closure device in accordance with the present invention.

If the joints are seated on the upper side of the base part, it is ensured that in a bearing position (the flapped-out position) the wings form a substantially horizontal plane over which the base part does not protrude. The base part (or any part of the base part) is thus unable to protrude into the puncture channel and prevent the puncture channel from growing together.

The Examiner rejects original claim 3 (the subject matter of which is now included in amended claim 1) as being unpatentable over King in view of Redmond.

Redmond mentions in column 11, lines 29-30 that the foot could be attached to the shaft with an active hinge like a living hinge run by weakening a region in the shaft and/or foot. It is to be noted that such a device with an articulated foot 208 attached to a shaft 206 as disclosed in Redmond (column 11, lines 15, 16) is not a closure device having a plurality of wings. Rather, the device shown in Figures 18A and 18B relied on by the Examiner show a device for delivering a homostatic gel to a vascular penetration (Col. 10, lines 63-65).

Further, King does not disclose or remotely suggest the subject matter of claim 16 (the subject matter of which is now included in amended claim 1) specifying that the joints are seated on an upper side of the base part, where the upper side of the base part faces the tissue when bearing areas bear on the tissue. This can be seen, for example, in Applicants' Figures 1 and 5, which shows the joints 50 are seated on the upper side 48 of the base part 32, and the upper side

48 of the base part 32 faces the tissue when the bearing areas 58 bear on the tissue (e.g., peritoneum 28).

In contrast, as can be seen, for example, from figure 2B of King, joints formed by hinge holes 86' are not arranged on the upper side of a base part that faces the tissue when bearing areas bear on the tissue, but rather on a circumferential area of the hub 84. As a result, the wings protrude laterally over the hub 84 in a flapped-in position, as can be clearly seen from figure 2A or figure 3A of King. In contrast, with Applicants' claimed invention, the wings are arranged for swiveling movement on the base part such that in a flapped-in position they do not protrude laterally over the base part, as claimed by Applicants.

Moreover, as can be seen from figures 9E and 9F of King, the hub 84 protrudes into the tissue opening which is in contrast to the present invention. With Applicants' claimed invention, since the joints are seated on an upper side of the base part which faces the tissue when bearing areas bear on the tissue, the base part itself does not protrude into the tissue opening.

Applicants respectfully submit that the present invention as set forth in amended claim 1 is not anticipated by and would not have been obvious to one skilled in the art in view of King, taken alone or in combination with Redmond or any of the other prior art of record.

Discussion of Prior Art Rejection of Amended Claim 31

Claim 31 is amended to include the subject matter of claims 33 and 36. Claim 31 is further amended to specify that the centering means inhibits a transverse movability of the holding mandrel relative to the positioning element.

Amended claim 31 now specifies that a holding mandrel is provided for holding and positioning the closure device. The positioning element provides a centering means for the holding mandrel inhibiting transverse movability. The holding mandrel can be inserted as a navigation instrument so as to position the closure device on the tissue. The closure device can be inserted (in the flapped-in position) via the holding mandrel into a body cavity without any necessity for an optical check (see, e.g., Applicants' specification, page 8, lines 18-22). The holding mandrel serves to navigate the closure device when inserting it into the body cavity and

fixing it on the tissue (see, e.g., Applicants' specification, page 9, lines 27-28). With the centering means for the holding mandrel, the closure device can be inserted into the body cavity and unfolded there without any optical adjusting aids (See, e.g., Applicants' specification, page 10, lines 15-18).

The Examiner has rejected original claims 33 to 36 (the subject matter of which is now included in amended claim 31) as being anticipated by King.

The application of the shunt defect closure apparatus of King is shown in figures 9A to 9K. The element 3 of King is an obturator guide wire (column 7, lines 60, 61). By pulling on the obturator wire, an umbrella 8 is pulled against the distal end 11 of an outer catheter 1, opening the umbrella (column 9, lines 39-42). The wire 3 of King is not a mandrel as apparently assumed by the Examiner. With the obturator wire 3 of King, it is not possible to navigate a closure device for positioning it. The obturator wire 3 of King is only effective for opening the umbrella 8 but not for navigating and positioning a closure device.

Moreover, King does not disclose or remotely suggest that a positioning element provides a centering means for a holding mandrel inhibiting relative transverse movability, as set forth in amended claim 31. As can be seen from, e.g., figure 9C of King, the wire 3 is not centered in the inner catheter 2 (column 9, line 47) and there is no mechanism present in King to inhibit the relative transverse movability of the wire 3 and the inner catheter 2.

The inserting, navigating, positioning and unfolding of a closure device without any optical adjusting aids, as is possible using the applicator device according to Applicants' amended claim 31, is not possible with the apparatus described by King. The applicator device set forth in Applicants' amended claim 1 is not disclosed or remotely suggested by King.

Applicants respectfully submit that the present invention as set forth in amended claim 31 is not anticipated by and would not have been obvious to one skilled in the art in view of King, taken alone or in combination with Redmond or any of the other prior art of record.

Further remarks regarding the asserted relationship between Applicants' claims and the prior art are not deemed necessary, in view of the foregoing discussion. Applicants' silence as to any of the Examiner's comments is not indicative of an acquiescence to the stated grounds of

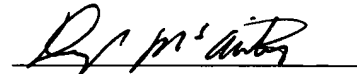
rejection.

Withdrawal of the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) is therefore respectfully requested.

Conclusion

The Examiner is respectfully requested to reconsider this application, allow each of the pending claims and to pass this application on to an early issue. If there are any remaining issues that need to be addressed in order to place this application into condition for allowance, the Examiner is requested to telephone Applicants' undersigned attorney.

Respectfully submitted,



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